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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,656	02/04/2004	Vera Buchholz	PO8046/LeA 36,416	3531
34947 7590 01/22/2007 LANXESS CORPORATION 111 RIDC PARK WEST DRIVE PITTSBURGH, PA 15275-1112			EXAMINER MULLIS, JEFFREY C	
			ART UNIT	PAPER NUMBER
			1711	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/22/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/771,656

Applicant(s)

BUCHHOLZ ET AL.

Examiner

Jeffrey C. Mullis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12-4-06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

The various parameters recited starting at paragraph 59 of applicants published specification are undefined. Correction is required.

Claims 1-2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. If applicants "weighted subtraction" is defined by the subject matter of paragraphs 59 et seq of their published application then claim 2 is unenabled in that the lack of definition of the various parameters renders this discussion unclear.

Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants specification does not define what is meant by "weighted subtraction" and this term is therefore unclear.

It is not clear what is meant by "at least one acrylonitrile" in that acrylonitrile encompasses only a single material, not more than 1.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Wolf et al (US 2003/0119199).

Wolf discloses a process in which Raman is used to monitor a graft polymerization and in which reaction partners are added based on said monitoring (abstract). Note the example at paragraph 115-120 for production of ABS and use of weighted subtraction.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Wenz (US 2003/0130433).

Wenz disclose a process in which ABS is produced while monitoring using Raman (abstract) and maintaining desired monomer rubber ratios (paragraph 65). With

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re to the term "weighted subtraction" in the claims as peak intensity and area vary depending on the material being observed by Raman any concentration determined would have to be determined based on the observed materials response to radiation as would be understood by those skilled in the art and the limitation of claim 2 would appear to have little meaning as a limitation.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The terminal disclaimer filed on 12-4-06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 7,122,379 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-15 of copending Application No. 10/281345. Although the conflicting claims are not identical, they are not patentably distinct from each other because the process of synthesizing the graft copolymer as recited by the copending claims is disclosed by the copending specification to include maintaining monomer and rubber ratios.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monsanto (GB 1200 414), cited by applicants in view of Schrof et al. (US 6,278,518) and/or Long et al. (US 2002/0156205).

Monsanto disclose process for producing ABS (Example 1) in which the rate of monomer addition is controlled (page 5, lines 48-55).

Monsanto does not disclose the use of Raman for monitoring their reaction

Long discloses that Raman can be used to monitor polymerization of unsaturated monomers to control the reactor constituents and that Raman has the advantage of in situ reliable real time analysis. Note paragraphs 6-9 in this re.

Schrof discloses that the advantages of monitoring polymerizations using Raman include high sensitivity and short reaction times and insensitivity to water. Note column 4, lines 46-60.

It would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention to use Raman to monitor the process of Monsanto as taught by

the secondary references motivated by the need of the primary references for a process of monitoring their polymerization and by the teachings of the secondary references that Raman will meet this need in a particularly efficient manner absent any showing of surprising or unexpected results.

Applicant's arguments filed 12-4-06 have been fully considered but they are not persuasive. With re to the parameters "I", "I", "K" and "Q", "factors", "quotients" and parameters which "refer" to reactor content and Raman spectra are not specific parameters which can be measured to practice a process such as concentrations, intensities etc. Factors or quotients can be anything not even related to the production of ABS while a reference to Raman can be intensity, frequency etc. It is not seen how any and all such values enable or clarify applicants weighted subtraction method.

With re to the rejections under 35 USC 102(e), applicants filing date is still subsequent to the filing date of the pregrant publications relied upon above.

With re to the rejection under 35 USC 103 relying on Monsanto and the scope of applicants claims, applicants "selected" value is not in any way limited and in fact is not even recited to be constant and as such applicants value of deviation of 12% based on the selected value means that in fact the concentration of styrene can vary without limit so long as the styrene concentration is viewed as being less than 12% from the selected value which can be any value at all. Furthermore it is not even necessary to adjust feed rate of any material so long as the styrene concentration does not deviate more than 12% from its selected value. Applicants claims do not exclude monitoring of monomers other than styrene.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey C. Mullis whose telephone number is 571 272 1075. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seidleck James, can be reached on M-F. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not



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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Jeffrey C. Mullis  
J Mullis  
Art Unit 1711

JCM

5-18-06

Jeffrey Mullis  
Primary Examiner  
Art Unit 1711

A handwritten signature in black ink, appearing to be 'JCM', located below the printed name and title of the examiner.